

#### US009636530B2

US 9,636,530 B2

May 2, 2017

# (12) United States Patent

Murray et al.

## (54) STOVETOP FIRE SUPPRESSOR WITH THERMAL GLASS BULB ACTUATION AND METHOD

(71) Applicants: **Donald W Murray**, Arlington, TX (US); **Richard M Anthony**, River Oaks, TX (US)

(72) Inventors: **Donald W Murray**, Arlington, TX (US); **Richard M Anthony**, River Oaks, TX (US)

(73) Assignee: WilliamsRDM, Inc., Fort Worth, TX (US)

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 27 days.

(21) Appl. No.: 14/529,086

(22) Filed: Oct. 30, 2014

(65) Prior Publication Data

US 2015/0238790 A1 Aug. 27, 2015

## Related U.S. Application Data

(63) Continuation-in-part of application No. 14/246,024, filed on Apr. 4, 2014.

(Continued)

(51) Int. Cl.

A62C 3/00 (2006.01)

A62C 35/10 (2006.01)

A62C 37/14 (2006.01)

(58) **Field of Classification Search**CPC ........ A62C 3/006; A62C 35/10; A62C 37/11;
A62C 37/14

See application file for complete search history.

# (56) References Cited

(10) Patent No.:

(45) Date of Patent:

#### U.S. PATENT DOCUMENTS

1,366,873 A 1/1921 Carpenter 1,766,912 A 6/1930 Laengel (Continued)

#### FOREIGN PATENT DOCUMENTS

AU 2015219475 8/2015 AU 2015219475 5/2016

### OTHER PUBLICATIONS

PCT/US2015/014148 Invitation to Pay Additional Fees per Additional Invention, 2 pages, dated Mar. 24, 2015.

(Continued)

Primary Examiner — Ryan Reis (74) Attorney, Agent, or Firm — Morani Patent Law, PC

### (57) ABSTRACT

An automatic stovetop fire suppressor using a compressed spring to lower a bottom lid upon thermal glass bulb fracture is provided herein. A plastic lid seals on the bottom of a can and forms a closed container. The closed container is filled with a fire suppressing agent. A compressed spring extends when a thermal glass bulb fractures. The extending spring lowers the bottom lid to open the closed container. Fire suppressing agent flows out of the radial opening, suppressing a stovetop fire with minimal or no splashing of cooking oil. A center post is secured to a top wall of the container. A ledge, or bottom support, secured to the container catches the bottom lid to limit the radial opening height. A gradual release of a fire suppressing agent in a desired distribution pattern and method of gradual and spatial agent release can be provided with a cone-shaped bottom lid.

## 3 Claims, 33 Drawing Sheets

